

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An apparatus for controlling an ~~electric~~ oven, comprising:
~~a key manipulation unit for manipulation of the electric oven~~ an input unit for inputting a set temperature of the oven;
~~a controller for controlling a temperature in a cavity of the electric oven to a set temperature according to a signal of the key manipulation unit; and~~
at least one heater which operates with ~~operated at a predetermined~~ variable heating on/off ~~interval cycle by means of the controller, the variable heating on/off cycle including a heater-on time and a heater-off time; and~~
a controller for adjusting the heating on/off cycle such that after the at least one heater operates for a current cycle period with a current heating on/off cycle, the controller generates a new heating on/off cycle by adjusting a the heater-on time in of the current heating on/off interval of the heater cycle being changed at a predetermined period with based on a difference between comparing a current temperature in the cavity oven with and the set temperature, the at least one heater operating with the new heating on/off cycle in a next cycle period.

2. (Currently Amended) The apparatus according to claim 1, wherein a heating-off time in the heating on/off ~~interval cycle~~ is fixed.

3. (Currently Amended) The apparatus according to claim 1, wherein, ~~the at least one heater~~ in case there are includes a plurality of heaters, as a result of comparison between the current temperature in the ~~cavity oven~~ and the set temperature, ~~a at least one of the heaters~~ with

greater heating capacity is being turned on if a temperature difference is greater than a predetermined criterion, ~~while at least one of a~~ the heaters with smaller heating capacity is being turned on if the temperature difference is smaller than ~~a~~ the predetermined criterion.

4. (Currently Amended) The apparatus according to claim 1, wherein the at least one heater includes, ~~in case there are~~ a plurality of heaters, as a result of comparison between ~~a~~ the current temperature in the ~~cavity oven~~ and the set temperature, all of the heaters are being turned off for a predetermined time if the set temperature is lower than the current temperature in the ~~cavity oven~~.

5. (Currently Amended) The apparatus according to claim 1, wherein as a result of comparison between ~~a~~ the current temperature in the ~~cavity oven~~ and the set temperature, the heater-on time of the heater in the new heating on/off cycle is elongated as the set temperature is higher than the current temperature in the ~~cavity oven~~.

6. (Currently Amended) The apparatus according to claim 1, ~~wherein, as a result of comparison between a current temperature in the cavity and the set temperature, the heater on time of the heater is elongated longer at each heater on interval as the set temperature is higher than the current temperature in the cavity~~ wherein, after the next cycle period is completed, the controller generates a second new heating on/off cycle by adjusting the heater-on time of the next heating on/off cycle based on a new difference between the current temperature in the oven and the set temperature.

7. (Currently Amended) The apparatus according to claim 1, wherein, as a result of comparison between ~~a~~the current temperature in the ~~cavity~~oven and the set temperature, the next heating on/off interval cycle is kept as it is unchanged if the difference between the current temperature and the set temperature is not more than a predetermined criterion.

8. (Currently Amended) The apparatus according to claim 1, wherein the set temperature is manually ~~designated~~set by a user.

9. (Currently Amended) A method for controlling an ~~electric~~oven, comprising:
~~comparing a current temperature in the electric oven and a set temperature; and~~
heating the ~~electric~~oven by ~~turning on/off~~operating at least one heater at a ~~predetermined interval~~with a current heating on/off cycle; in a current cycle period, the current heating on/off cycle including a heater-on time and a heater-off time;

after the current cycle period is completed, generating a new heating on/off cycle by adjusting the heater-on time of the current heating on/off cycle based on a difference between a current temperature in the oven and a set temperature; and

operating the at least one heater with the new heating on/off cycle in a next cycle period
~~wherein a heater-on time of the heater is elongated according to a temperature difference obtained in the comparing step.~~

10. (Currently Amended) The method according to claim 9, ~~wherein the larger number of~~ further comprising turning on the heaters ~~are turned on~~ as the current temperature in the electric oven is lower than the set temperature ~~as a result of the comparing step~~.

11. (Currently Amended) The method according to claim 9, ~~wherein~~ further comprising turning on a heater with greater heating capacity among a ~~plurality of the heaters is~~ turned on as the current temperature in the electric oven is lower than the set temperature ~~as a result of the comparing step~~.

12. (Currently Amended) The method according to claim 9, wherein, in the heating step, a plurality of ~~the~~ heaters are alternately or simultaneously operated in consideration of electric power.

13. (Currently Amended) The method according to claim 9, wherein the heater-on time of the heater is ~~changed~~ adjusted at a predetermined period repeatedly after each heating on/off cycle is completed.

14. (Currently Amended) The method according to claim 9, wherein, ~~in case there are a plurality of heaters,~~ in the heating step, the heaters to be operated are selected by ~~the~~ a smaller number of combinations than the number of cases of a subset for the number of the heaters.

15. (Currently Amended) The method according to claim 9, ~~wherein, as a result of the comparing step, the generating step includes elongating the heater-on time of the heater in the new heating on/off cycle is elongated~~ as the current temperature is lower than the set temperature.

16. (Currently Amended) The method according to claim 9, ~~wherein, as a result of the comparing step, the heater on time of the heater in the heating on/off interval is elongated as the current temperature is lower than the set temperature~~further comprising, after the next cycle period is completed, generating a second new heating on/off cycle by adjusting the heater-on time of the next heating on/off cycle based on a new difference between the current temperature in the oven and the set temperature.

17. (Currently Amended) The method according to claim 9, ~~wherein, as a result of the comparing step, further comprising turning on all of the heaters are turned off~~ for a predetermined time if the current temperature is higher than the set temperature.

18. (Currently Amended) The method according to claim 9, ~~wherein, as a result of the comparing step, further comprising keeping the next heating on/off interval of the heater is not unchanged if the difference between the current temperature and the set temperature is not more than a predetermined criterion.~~

19. (Currently Amended) An apparatus for controlling an ~~electric~~ oven, comprising:
an input unit for inputting a set temperature of the oven~~a key manipulation unit for manipulation of the electric oven;~~
at least one a plurality of heaters formed located in the electric oven, each of the heaters operating with a variable heating on/off cycle, the variable heating on/off cycle including a heater-on time and a heater-off time; and
a controller for selectively turning on/off the heaters based on a difference between a current temperature in the oven and the set temperature, when at least one of the heaters is selected to turn on, for operating the heater according to a signal of the key manipulation unit so that the heater is turned on/off at a predetermined interval, and changing a heater-on time of the heater in the heating on/off interval according to a difference between a current time in the electric oven and a set temperature and for adjusting the heating on/off cycle such that after the at least one of the heaters operates for a current cycle period with a current heating on/off cycle, the controller generates a new heating on/off cycle by adjusting the heater-on time of the current heating on/off cycle based on the difference between the current temperature in the oven and the set temperature, the at least one of the heaters operating with the new heating on/off cycle in a next cycle period.

20. (Currently Amended) The apparatus according to claim 19, wherein ~~the set temperature and the current temperature are compared, and the heating on time of the new heating on/off cycle is elongated longer~~ as the set temperature is higher than the current temperature.

21. (New) The apparatus according to claim 1, further comprising a sensor for measuring the current temperature in the oven.

22. (New) The apparatus according to claim 21, further comprising means for comparing the current temperature in the oven measured by the sensor and the set temperature and obtaining the difference between the current temperature in the oven and the set temperature.

23. (New) The apparatus according to claim 22, wherein the controller includes means for adjusting the heater-on time of the current heating on/off cycle based on the difference between the current temperature in the oven and the set temperature obtained by the comparing means.

24. (New) The apparatus according to claim 23, wherein the adjusting means adds one of a plurality of predetermined time periods to the heater-on time of the current heating on/off cycle as the heater-on time of the new heating on/off cycle when the difference between the current temperature in the oven and the set temperature is larger than a corresponding one of a plurality of predetermined values.

25. (New) The apparatus according to claim 1, wherein the controller adds one of a plurality of predetermined time periods to the heater-on time of the current heating on/off cycle as the heater-on time of the new heating on/off cycle when the difference between the current

temperature in the oven and the set temperature is larger than a corresponding one of a plurality of predetermined values.

26. (New) The method according to claim 9, wherein the step of generating the new heating on/off cycle includes adding one of a plurality of predetermined time periods to the heater-on time of the current heating on/off cycle to be the heater-on time of the new heating on/off cycle when the difference between the current temperature in the oven and the set temperature is larger than a corresponding one of a plurality of predetermined values.

27. (New) The apparatus according to claim 19, further comprising a sensor for measuring the current temperature in the oven.

28. (New) The apparatus according to claim 27, further comprising means for comparing the current temperature in the oven measured by the sensor and the set temperature and obtaining the difference between the current temperature in the oven and the set temperature.

29. (New) The apparatus according to claim 28, wherein the controller includes means for adjusting the heater-on time of the current heating on/off cycle based on the difference between the current temperature in the oven and the set temperature obtained by the comparing means.

30. (New) The apparatus according to claim 29, wherein the adjusting means adds one of a plurality of predetermined time periods to the heater-on time of the current heating on/off cycle as the heater-on time of the new heating on/off cycle when the difference between the current temperature in the oven and the set temperature is larger than a corresponding one of a plurality of predetermined values.

31. (New) The apparatus according to claim 19, wherein the controller adds one of a plurality of predetermined time periods to the heater-on time of the current heating on/off cycle as the heater-on time of the new heating on/off cycle when the difference between the current temperature in the oven and the set temperature is larger than a corresponding one of a plurality of predetermined values.